

DETAILED ACTION

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on October 18, 2011 has been entered.

Acknowledgement of Receipt/Status of Claims

This Office Action is in response to the amendment filed August 18, 2011. Claims 1,4,5 and 8-13 are pending in the application. Claims 2-3 and 6-7 have been cancelled. Claims 1,4,5 and 11 have been amended. Claims 8-10,12 and 13 have been withdrawn as being directed to a non-elected invention. Claims **1, 4, 5 and 11** are being examined for patentability.

Declaration

Norihisa Sakamoto's declaration filed on August 18, 2011 and also on September 28, 2011 under 37 CFR 1.132 is not persuasive and will be discussed in detail below.

Maintained Rejections

Applicant's arguments filed August 18, 2011 are acknowledged and have been fully considered.

The following rejections and/or objections are either reiterated or newly applied. They constitute the complete set of rejections and/or objections presently being applied to the instant application. The rejection of claims 1, 4, 5 and 11 under 35 U.S.C. 103(a) as being unpatentable over Berger et al. (US Patent 7,696,232 B2) **is maintained**.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.

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4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 1,4,5 and 11 remain rejected under 35 U.S.C. 103(a) as being unpatentable over Berger et al. (US Patent 7,696,232 B2).

Applicant's Invention

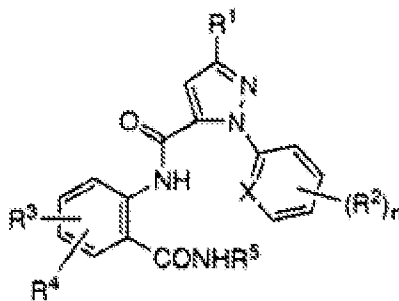
Applicant claims an insecticide composition which comprises one or not less than two kinds of compounds being selected from a compound

represented by the

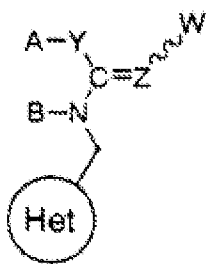
formula[Ia] or a salt

thereof and

thiamethoxam.



(I)



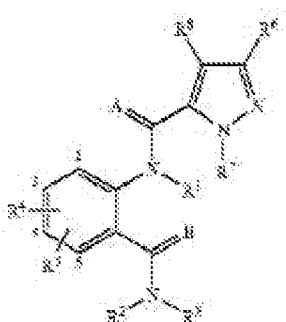
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***Determination of the scope and the content of the prior art
(MPEP 2141.01)***

Berger et al. teach methods for protecting a propagule or a plant grown therefrom from invertebrate pests comprising contacting the propagule or the locus of the propagule with a biologically effective amount of a compound of Formula I (see below), its N-oxide or an agriculturally suitable salt thereof (abstract). Berger et al. teach that their invention relates to **the control of phytophagous invertebrate pests** such as arthropod pests by contacting plant propagules or the locus of the propagules with certain anthranilamides as well as propagule-coating compositions comprising said anthranilamides (column 1, lines 10-17). Berger et al. teach the compound of instant formula I (compound of formula I of Berger et al. shown below wherein :R₈=H; R₇= a hetroaromatic ring (X=N of instant application);

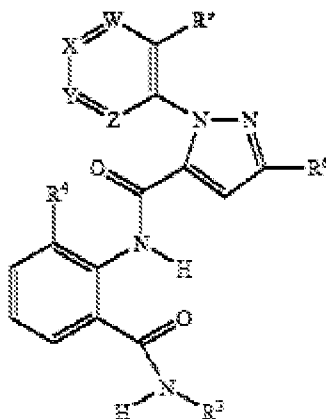
R₁, R₄, R₅, and R₆= H, C₁-C₆ alkyl group, a C₁-C₆ haloalkyl group or a halogen atom; R₂ and R₃=H or C₁-C₆ alkyl; A=O and B=O (see claim 1 of Berger et al.).



Compound of formula I of Berger et al.

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Berger et al. teach the use of the compound of instant formula I and at least one additional biologically active compound or agent such as clothianidin , imidacloprid, thiacloprid, **thiamethoxam** and acetamiprid(see claims 5 and 7 of Berger et al.). Specifically, Berger et al. teach the compound below (see table 2 of column 59 of Berger et al.) wherein **W, X and Y=CH; Z=N; R3=an isopropyl group; R4=methyl and R6 and R9= chlorine** (compound IA of instant application as disclosed in instant claim 4).



For growing-medium drenches, Berger et al. teach that the formulation needs to provide the Formula I compound, generally after dilution with water, in solution or as particles small enough to remain dispersed in the liquid. Berger et al. teach that water-dispersible or soluble powders, granules, tablets, emulsifiable concentrates, aqueous suspension concentrates and the like are formulations suitable for **aqueous drenches of growing media**. Berger et al. teach that the drench liquid comprising the Formula I compound can be added to a liquid growing medium (i.e. hydroponics), which causes the Formula I compound to become part of the liquid growing medium (column 84, lines 53-66).

***Ascertainment of the difference between the prior art and the claims
(MPEP 2141.02)***

The difference between the invention of the instant application and that of Berger et al. is that Berger et al. do not expressly teach an example of a composition comprising the compounds of instant formula I and II.

Finding of prima facie obviousness

Rationale and Motivation (MPEP 2142-2143)

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the teaching of Berger et al. to arrive at a composition comprising the compounds of instant formulas I and II for the use of controlling an insect pest. Berger et al. suggest the use of the compounds of instant formulas I and II for the control of phytophagous invertebrate pests such as arthropod pests. One would have been motivated to use the teaching of Berger et al. because all the claimed elements were known in the prior art and one skilled in the art could have combined the elements as claimed by known methods with no change in their respective functions, and the combination would have yielded predictable results to one of ordinary skill in the art at the time of the invention. Thus, in view of *In re Kerkhoven*, 205 USPQ 1069 (C.C.P.A. 1980), it is *prima facie* obvious to combine two or more compositions each of which is taught by prior art to be useful for the same purpose in order to form a third

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composition that is to be used for the very same purpose. The idea of combining them flows logically from their having been individually taught in prior art.

In light of the forgoing discussion, the Examiner concludes that the subject matter defined by the instant claims would have been obvious within the meaning of 35 USC 103(a).

From the teachings of the references, it is apparent that one of ordinary skill in the art would have had a reasonable expectation of success in producing the claimed invention. Therefore, the invention as a whole was *prima facie* obvious to one of ordinary skill in the art at the time the invention was made, as evidenced by the references, especially in the absence of evidence to the contrary.

Response to Arguments

Applicant's arguments, filed October 18, 2011 with respect to the 103 rejection of claims 1-6 and 11 were rejected under 35 U.S.C. 103(a) as being unpatentable over Berger et al. (US Patent 7,696,232 B2) have been considered but are persuasive.

Applicant has argued that the claimed composition provides superior and unexpected results over the art because of a synergistic effect of the combination of both a compound of formula [I] and a compound of formula [II]. Thus, Applicant

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concludes that the claimed composition exerts excellent insecticidal effects that cannot be obtained when each of the compounds in the claimed composition is used alone. Applicant points to Test Example 2 of the specification, a compound represented by the formula [II] (i.e., thiamethoxam) alone in a composition shows no insecticidal activity of *Spodoptera litura* at an application concentration of 0.007 ppm, and a compound represented by the formula [I] (i.e., compound (I-I)) alone in a composition shows a 55% death rate of *Spodoptera litura* at an application concentration of 0.007 ppm (see Table 2 and page 40, lines 7-11 of the specification). In spite of these results, Applicant argues that the claimed composition comprising a compound represented by the formula [I] and a compound represented by the formula [II] shows an 80% death rate of *Spodoptera litura* at the same application concentration (i.e., thiamethoxam: 0.007 ppm and compound (I-I): 0.007 ppm) (see Table 2 and page 40, lines 7-11 of the specification). Applicant further argues that it is clear from Test Example 5 of the specification, a compound represented by the formula [II] (thiamethoxam) alone shows a 10% death rate of *Plutella xylostella* at an application concentration of 0.0064 ppm, and a compound represented by the formula [I] (compound (1-4)) alone shows a 15% death rate of *Plutella xylostella* at an application concentration of 0.0064 ppm (see Table 8 and page 45, lines 5-20 of the specification). In spite of these results, Applicant argues that the claimed composition comprising a compound represented by the formula [I] (compound (I-4)) and a compound represented by the formula [II] (thiamethoxam) shows a 50% death rate of *Plutella xylostella* at the same application concentration (i.e.,

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thiamethoxam: 0.0064 ppm and compound (I-4): 0.0064 ppm) (see Table 8 and page 46, lines 7-11 of the specification). The Examiner agrees that the composition comprising both a compound represented by formula [I-1] and or [I-4] in combination with thiamethoxam exerts superior and unexpected synergistic insecticidal activity. However, unexpected results have to be commensurate with the scope of the invention. "Whether the unexpected results are the result of unexpectedly improved results or a property not taught by the prior art, the "objective evidence of nonobviousness must be commensurate in scope with the claims which the evidence is offered to support." In other words, the showing of unexpected results must be reviewed to see if the results occur over the entire claimed range. *In re Clemens*, 622 F.2d 1029, 1036, 206 USPQ 289, 296 (CCPA 1980)." As previously argued by Applicant, the instant specification provides examples showing that the compositions comprising both a compound represented by formula [I-1] (**wherein R5= isopropyl and R1=trifluormethyl**) and [I-4] (**wherein R5= isopropyl and R1=chlorine**) in combination with thiamethoxam exert superior and unexpected synergistic insecticidal activity. However, claims 1 and 4 are not so limited because for compound Ia, **R1=halogen and R5= C1-3 alkyl**. Objective evidence of nonobviousness, if any, must be commensurate in scope with that of the claimed subject matter. *In re Kulling*, 14 USPQ2d 1056 (Fed. Cir. 1990); *In re Lindner*, 173 USPQ 356 (CCPA 1972).

New Rejection(s)

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims **1,4,5 and 11** are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Regarding claims 1,4,5 and 11, the phrase "represented by" renders the claim indefinite because it is unclear whether the limitations following the phrase are part of the claimed invention. See MPEP § 2173.05(d).

Claim Rejections- 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

Claims **1,4 and 5** are newly rejected under 25 U.S.C. 102(a) as being anticipated by Berger et al.(WO 03/024222 A1, submitted by Applicant on 10/20/10).

Applicant claims an insecticide composition which comprises one or not less than two kinds of compounds being selected from a compound represented by the formula[la] or a salt thereof and thiamethoxam.

Berger et al. disclose a composition comprising compound Ia combined with thiamethoxam (see pages 9-12 and claims 1,16,19 and 21 of Berger et al.).

Berger et al. meet all of the limitations of the claims and the claims are thereby anticipated.

Declaration

Applicant's Declaration Filed Under 37 C.F.R. 1.132 filed on August 18, 2011 and also on September 28,2011 has been fully considered but is not persuasive. Applicant provides further evidence of the unexpected synergistic

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effects of the claimed composition. Applicant's declaration shows a composition comprising a compound of formula [I-7] and thiamethoxam demonstrates unexpected synergistic effects over a compound of formula [I-7] alone and thiamethoxam alone. Applicant argues that the compound of formula [I-7] is a compound of formula [Ia]. The Examiner agrees that the composition comprising both a compound represented by formula [I-7] in combination with thiamethoxam exerts superior and unexpected synergistic insecticidal activity. However, there is no support for compound I-7 in the instant specification. Although the instant specification discloses a genus encompassing compound I-7 (i.e., formula I), Applicant has not disclosed the species of compound I-7 or any experiments wherein compound I-7 and thiamethoxam were formulated in a single composition at the time the instant application was filed.

Therefore, the aforementioned declaration is not persuasive.

Conclusion

No claims are allowed.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Courtney A. Brown whose telephone number is 571-270-3284. The examiner can normally be reached on 9:00 am-5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Fereydoun Sajjadi can be reached on 571-272-3311. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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